The Changing Pattern of Enteric Fever At Birendra Hospital

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Enteric fever is one of the water born diseases. Inspite of improvement in hygiene and sanitation enteric fever is still very common disease in Kathmandu. It is equally common among army personnel residing in the brigade, battalion and companies located at Kathmandu. Occasional case of enteric fever is seen throughout the year. However maximum no of cases are seen immediately after rainy season. Since blood culture and even bone marrow culture may not be positive in majority of cases, clinical judgement is most important to diagnose this diseases. The term enteric fever includes both Typoid, paratyphoid fever (A & B). Paratyphoid fever occurs slightly in milder form. The organisms are facultative intracelluar gram negative Bacilli and have complex antigenic composition. Not only the clinical picture but also the drug sensitivity and pathogen of the disease have changed considerably in last couple of years. This paper will highlight the causative organism clinical presentation serological findings and antibiotic sensitivity pattern of blood culture and positive cases of enteric fever admitted to Shree Birendra Hospital from 2054-1-1 to 2057-12-31

2054-12-31 to 2055-1-1

Total no. of enteric rfever	660
a) culture positive	174.
B) culture negative (clinical)	486
Percentage of positive cases	26.3%

2055-1-1 to 2055-12-30

Total no. of Enteric fever	560
a) culture positive	164
b) culture negative	396
Percentage of positive cases	29.2%

2056-1-1 to 2056-12-30

Total no. of Enteric Fever	532
a) cultural positive	153
b) cultural negative	379
percentage of Positive cases	29.3%

2057-1-1 to 2057-12-31

Total no. of Enteric fever	342
a) culture positive	173
b) culture negative	169
percentage of positive cases	50.5%

90% of the cases of enteric fever were caused by S. styphi and 5% of the cases were due to paratyphi A+. There were no paratyphi B+ cases.

Clincial Features	
Anorexia	100%
Cough sore throat	30%
Diarrhoea	10%
Vomiting	5%
Brachycardia	100%
Hypotension	25%
Rose Spots	1%
Coated tongue	100%
Splenomegaly	75%
Hepatomegaly	15%
Toxaemia (with distend abdomen, Tachycardia meningis) Encephalopahty	15%
Neuropsychiatric manifestation	–
Profues Sweating	2%
Peistaxis	1%
	1%

DRUG SENSITIVITY

a) Ciprofloxacin	100%
2) Chloramphenicol	100%
3) Trimetoprim (Sulphamethoxazole	95%

Average duration of defervescence with cifrafloxacin was 5 days.

NB : During 2057 inspite of drug sensitivity 10% cases of enteric fever did not respond to ciprofloxacin. When some of them were treated with chloramphenicol and ceftriaxone and they promptly responded. In 1958 there were more cases not responding to ciprofloxacin. Lab diagnosis has shown considerable improvement during 2057.

DRUGS AVAILABLE

CHLORAMPHENICOL
It is still a very effective drug. We have used it in a couple cases resistant to ciprofloxacin

AMPICILLIN
Inspite of high doese of 300mg/kg body wt it is not effective.

AMOXYCILLING
Adult dose is 1 gm 6 hourly. Failure rate high.

COTRIMAXAZOLE
Many cases are resistant.

FUROZOLIDONE
It was tried in India. The defervescene takes a longer time.

MICILLINAM
It is not effective.

CEFOPERAZONE
Dose 2 mg i.v 8 hourly. It is effective but costly.

CEFTRIAXONE
Dose 2-4 gm per day i.v. It is as effective as chloramphenicol but defervescene takes more than 10 days.

COTRIMAXAZOLE
Dose is Trimethoprim-160 mg and sulphamethoxazole-800 mg. Quite a few resistant cases exist.

CIPROFLOXACIN
We use 750 mg b.d till defervescene. Then 500 mg b.d. to make it total 14 days. It is a very effective drug. There was no treatment failure till 2056. 5% treatment failure occurred in 2057.We expect it to increase this year.

IMMUNOPROPHYLLAXIS

TAB VACCINE
We used to give typhoid vaccine to all the soldiers till 2040. As aresult, there were less cases of typhoid fever.

NEWER VACCINES
1. **Live oral vaccine**
   Salmonella typhi gal E-mutant Ty21, a strain has been developed which has proved highly effective (upto 69%-96%)
2. **Vi Vaccine**
   It was first developed by Mericux Institute (France). A 17 month sureillance in a controlled field trail at Nepal showed 72% effectiveness.

CONCLUSION
Though our lab is better in growing typhoid bacilli, the clincialjudgement is still very important because of the changing pattern of the disease. As aresult of widespread use of Ciprofloxacin, there are more and more treatment failures every year.
Like many infectious diseases, this too is a preventable disease. Since a well-tried safe vaccine is availalbe, the army personnels should all be immunized against the disease.

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